

What is claimed is:

1 1. An apparatus, comprising:
2 a first electronic device adapted to
3 compare a first indicator of a predicted duration of a first transmission to
4 a second electronic device with a second indicator of a predicted duration of a second
5 transmission to a third electronic device;
6 adjust starting times of at least one of the first and second transmissions
7 to cause the first and second transmissions to end at approximately a same time; and
8 transmit the first and second transmissions using the adjusted starting
9 times.

1 2. The apparatus of claim 1, wherein the first electronic device is further adapted
2 to receive a first response comprising a first acknowledgment to the first transmission
3 from the second electronic device and to receive a second response comprising a
4 second acknowledgment to the second transmission from a third electronic device.

1 3. The apparatus of claim 1, wherein the first electronic device is further adapted
2 to include a poll in the first transmission and to include a poll and other data in the
3 second transmission.

1 4. The apparatus of claim 1, wherein the first electronic device is further adapted
2 to set a transmission period for the first and second transmissions based on a longer of
3 the predicted durations of the first and second transmissions.

1 5. The apparatus of claim 1, wherein:
2 the first transmission and the second transmission are to have different data
3 rates; and
4 the predicted durations of the first and second transmissions are partly based on
5 the different data rates.

1 6. The apparatus of claim 1, wherein the first electronic device comprises a
2 computing platform to perform said comparing.

1 7. The apparatus of claim 6, further comprising at least four
2 modulator/demodulators coupled to the computing platform.

1 8. The apparatus of claim 7, further comprising at least four antennas, each of the
2 at least four antennas coupled to at least one of the at least four
3 modulator/demodulators.

1 9. The apparatus of claim 1, wherein the first electronic device comprises a base
2 station.

1 10. The apparatus of claim 1, wherein the second and third electronic devices
2 comprise mobile devices.

1 11. The apparatus of claim 1, wherein the first electronic device is further adapted
2 to transmit the first and second transmissions using spatial division multiple access
3 techniques.

4 12. A method, comprising:
5 making a comparison of a first indicator of a predicted duration of a first
6 transmission to a first electronic device with a second indicator of a predicted duration
7 of a second transmission to a second electronic device;
8 beginning a transmission of a longer of the first and second transmissions; and
9 beginning a transmission of a shorter of the first and second transmissions after
10 a delay approximately equal to a difference between the predicted duration of the first
11 transmission and the predicted duration of the second transmission;
12 wherein the first and second transmissions use spatial division multiple access
13 techniques.

1 13. The method of claim 12, further comprising ending the first and second
2 transmissions at approximately a same time.

1 14. The method of claim 13, further comprising beginning an acknowledgment
2 timeout period after said ending the first and second transmissions.

1 15. The method of claim 12, further comprising receiving a first response from the
2 first electronic device and receiving a second response from the second electronic
3 device substantially simultaneously.

1 16. The method of claim 15, wherein said receiving the first and second responses
2 comprises receiving a beginning of the first and second responses approximately an
3 interframe space after an end of the first and second transmissions.

- 1 17. The method of claim 12, further comprising using data rates to determine the
- 2 predicted durations.

1 18. A machine-readable medium that provides instructions, which when executed
2 by a processing platform, cause said processing platform to perform operations
3 comprising:
4 determining predicted durations of multiple transmissions to be transmitted
5 from an electronic device;
6 adjusting start times for at least some of the transmissions to cause the multiple
7 transmissions to end at approximately a same time; and
8 transmitting the multiple transmissions substantially simultaneously using the
9 adjusted start times and using spatial division multiple access techniques.

1 19. The medium of claim 18, wherein said determining comprises using data rates
2 to determine said predicted durations.

1 20. The medium of claim 18, wherein the operations further comprise receiving
2 responses to the multiple transmissions substantially simultaneously.

1 21. The medium of claim 20, wherein the operations further comprise initiating a
2 timeout period for reception of an acknowledgment to at least one of the multiple
3 transmissions.

1 22. The medium of claim 20, wherein said receiving comprises receiving
2 beginnings of the responses approximately an interframe space after an end of the
3 multiple transmissions.